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The Use of Interpreters to Improve the Quality and Safety of Healthcare Through Better Communication in Obstetric Patients: Effect on Primary Cesarean Delivery Rate

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The Use of Interpreters to Improve the Quality and Safety of Healthcare Through Better Communication in Obstetric Patients: Effect on Primary Cesarean Delivery Rate



**CAPSTONE PROJECT – MSHQS
JEFFERSON SCHOOL OF POPULATION
HEALTH**

STEPHEN A. PEARLMAN M.D.

AUGUST 30, 2012

ACKNOWLEDGEMENTS



- JSPH Faculty and Dean Nash
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- CCHS Staff – Olabisi Adededeji, Donna Mahoney, Deborah Caputo-Rosen, Jacqueline Ortiz, Claudia Acero
- My Family

Personal Experience



Twas the night before Christmas.....



PURPOSE



- Language barriers contribute to poor healthcare outcomes and increase medical costs.
- This quality improvement effort addressed these issues
 - ✦ interpreter services
 - ✦ staff training in cultural competency
- Labor and Delivery targeted due to the high volume of patients with Limited English Proficiency (LEP)
- Focus is on healthcare outcomes

PRINCIPAL CAUSES OF DISPARITIES



- Values, behaviors and preferences impact thresholds of care
- Inability to communicate
 - Unable to explain symptoms
 - Cannot comprehend plan of care
 - Poor compliance



CULTURAL COMPETENCY



- “A set of congruent behaviors, attitudes and policies that come together in a system, agency or among professionals that enables effective work in cross-cultural situations.” (Minority Health.hhs.gov, 2011)
- United States – A nation of immigrants
- Cultural competency is essential in healthcare



REGULATORY ISSUES



- Culturally and Linguistically Appropriate Services (CLAS) 14 standards for HC organizations
 - Provision of free language assistance services
 - Verbal and written notification that language services are available
 - Assuring the competence of translators
 - Provision of easily understood patient related materials and signage in the languages commonly used in the community
- ACGME – rubric for professionalism “demonstrate sensitivity and responsiveness to patient’s culture
- Joint Commission 2010 Standards of Patient Centered Communication

CHRISTIANA CARE HEALTH SYSTEMS



- Largest tertiary care teaching hospital in Delaware and a clinical campus for JMC
- Serving a community with increasing diversity
- Hired CulturaLink to perform a needs assessment
- Also used AMA Communication Climate Assessment Tool
- Census findings
 - 12% of Delawareans speak language other than English
 - 52% of which speak Spanish
 - 38% of those who speak another language are LEP

NEEDS IDENTIFIED



- Improvement of language services delivery
- Comprehensive training on interacting with a diverse patient population
- Collection of data on race, ethnicity and primary language
- Our data
 - Hispanic babies misassigned



PROJECT DESIGN



- Team – SVP for Systems Learning and Chief Diversity Officer, VP Patient Care Services, Chief Nursing Officer, Chairs of Pediatrics and Obstetrics, Neonatal Fellowship Director
- Target – Labor and Delivery because increasing Hispanic patients and data suggesting lower quality of care
- Speculated that suboptimal communication leads to unnecessary cesarean deliveries and negatively impacts other medical outcomes
- Intervention
 - Full time Spanish and augmented multilingual telephonic interpreters
 - TeamSTEPPS – AHRQ program to build highly effective HC teams

Slide 10

JP3

Your second bullet is CRITICAL.

James Pelegano, 8/4/2012

STUDY DESIGN – Timeline



March-August
2011

- Pre-intervention data collection

September-
October 2011

- TeamSTEPPS training 115 L&D staff
- Live Spanish and augmented multilingual interpreters

October 2011
– March 2012

- Post-intervention data collection

BARRIER ANALYSIS



- Availability of competent interpreters
- Proper identification of patients who need services
- Cost
- Lack of understanding of providers

STAKEHOLDER ANALYSIS



- LEP patients
- Obstetric providers
- Hospital administration
- Community at large



RESULTS – Overall Population



	Pre- Intervention	Post-Intervention
Total Deliveries	3510	3176
Total C-Sections	1145	1015
Primary C-Section Rate	21.94%	21.54%

RESULTS – Maternal Outcomes



	Pre-Intervention	Post-Intervention	P-value
Elopements	67	68	.56
Left Against Medical Advice	21	35	.03
Antepartum Steroids	100 %	100 %	1.0
Postpartum Hemorrhage	96	114	.05
Readmissions	65	65	.62
Length of Stay(d)	2.95±2.99	2.97±3.18	.73

RESULTS – Neonatal Outcomes



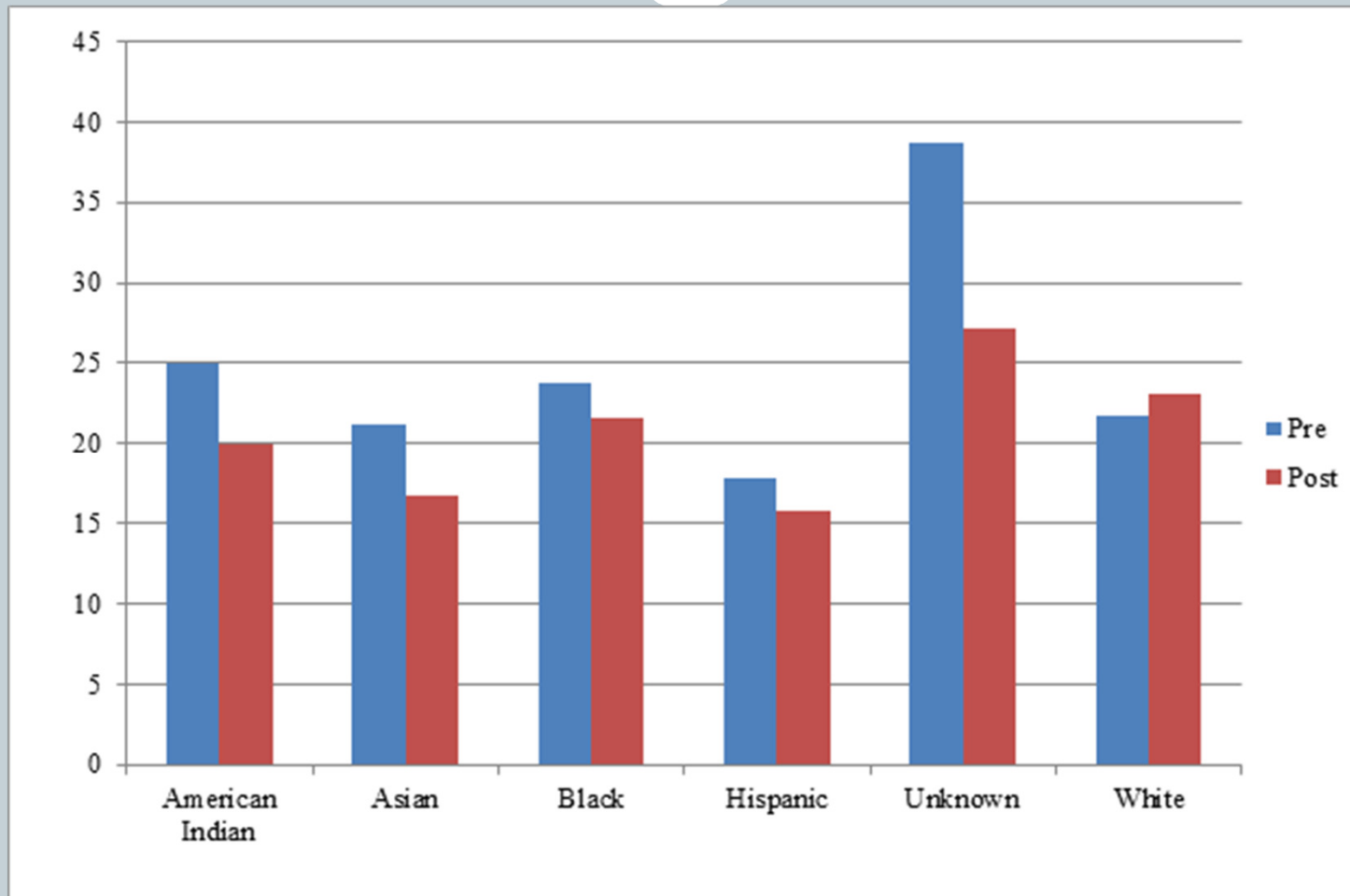
	Pre- Intervention	Post- Intervention	P-value
Stillborn	28	27	.92
Inborn Mortality	28	28	.81
Admission to NICU	555	469	.25
Immunizations	90.64%	90.81%	.86
BF at discharge	29.3%	30.1%	.54
< 2500g	330	236	.004
Hospital charges	\$8960±6054	\$9299±6151	.03
Lab charges	\$434±844	\$471±817	.07

RESULTS – Cesarean Delivery by Ethnicity



	Pre- Intervention		Post- Intervention		
	Total Deliveries	Primary Cesarean Rate	Total Deliveries	Primary Cesarean Rate	P-value
American Indian	24	25.0%	21	20.0%	1.0
Asian	188	21.2%	185	16.7%	0.39
Black	857	23.7%	833	21.6%	0.48
Hispanic	428	17.8%	382	15.7%	0.53
Unknown	42	38.7%	28	27.3%	0.57
White	1897	21.7%	1664	23.1%	0.41
TOTAL	3436	21.94%	3113	21.54%	0.69

Primary Cesarean Delivery by Ethnicity



Use of Interpreters



- **Live Spanish interpreter**
 - Averaged 100 encounters per month
 - Average encounter lasted 50 minutes
- **Telephonic interpreters**
 - All languages 15,010 minutes pre-intervention and 12,456 minutes post-intervention
 - Spanish only 12,414 minutes pre-intervention and 10,030 post-intervention
 - Mandarin, most common Asian language increased from 281 minutes to 478 minutes
 - New languages Japanese, Hebrew, Cantonese, Kurdish, Farsi

FINANCIAL ANALYSIS



- **Annual Costs**

- \$60,000 interpreter and manager
- \$60,000 telephonic interpreters
- \$30,000 implementation of TeamSTEPPS

- **Annual Savings**

- 5088 minutes less telephonic \$4223
- 50 fewer cesarean deliveries \$175,000
- 100 fewer babies < 2500g \$200,000
- 20 fewer NICU admissions \$300,000
- Decreased Malpractice risk average settlement \$6million

Summary of Findings



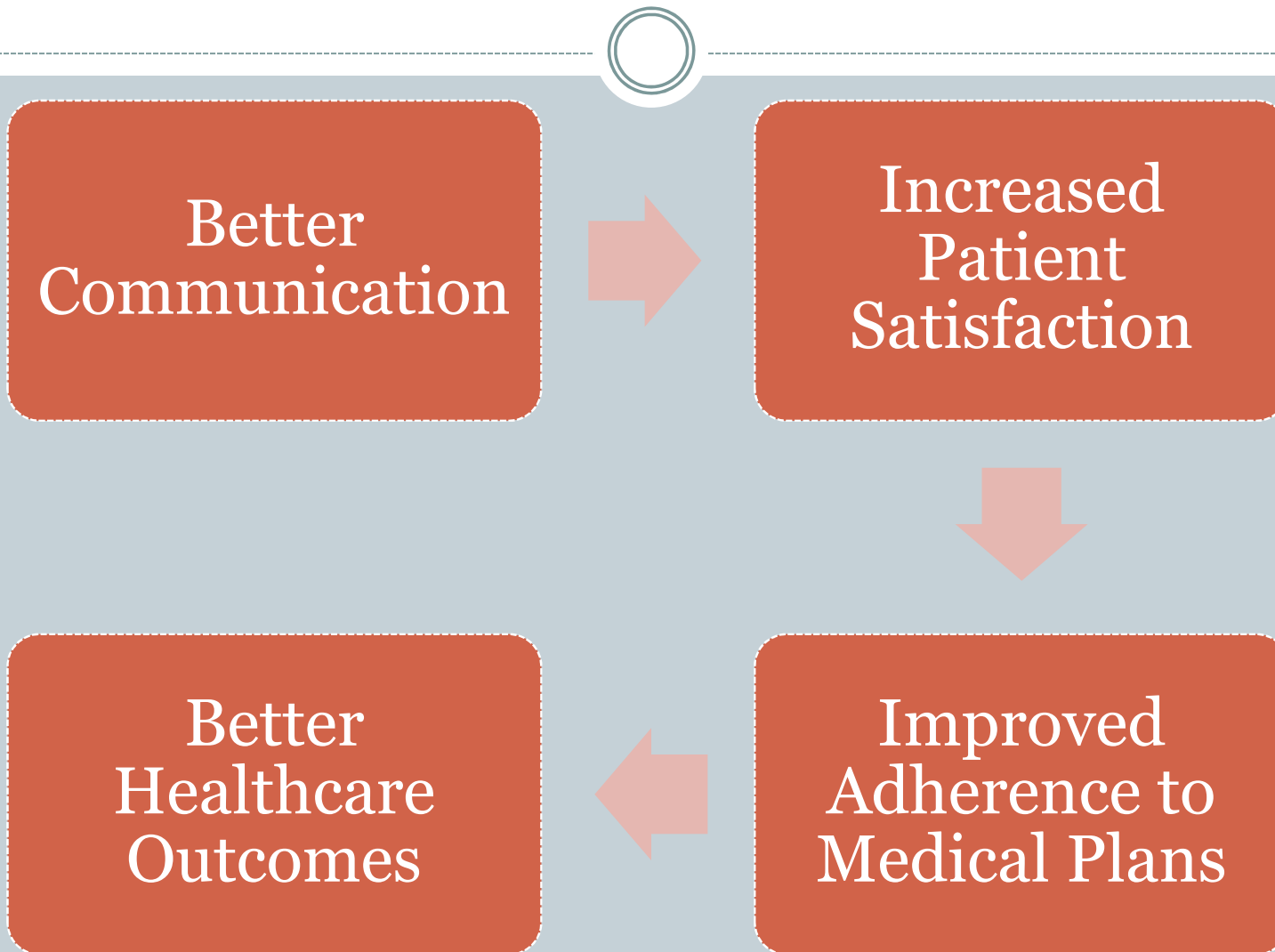
- **Decreased primary cesarean deliveries**
 - Asian population – 20.9% from baseline
 - Hispanic population – 12.4% from baseline
- **Decreased number of babies < 2500 grams**
- **Increased postpartum hemorrhage, mothers who signed out AMA and hospital charges**
- **Limitations –**
 - Focused on language
 - Don't know exact number of LEP patients
 - Small numbers when patients stratified by ethnicity

Discussion



- Previous studies show that use of interpreters improves patient satisfaction amongst LEP patients (Flores 2005)
- Language services alone do not address cultural differences
- Systematic review showed that educational programs do improve cultural competence of providers (Beach 2005)

Proposed Mechanism – Betancourt 2003



Future Directions



- Increased needs to cope with diversity as minority population continues to increase in the US from 28% currently to 40% by 2030
- Recording patients' race, ethnicity and preferred language
- Expansion of live interpreter services to other areas of the hospital
- Expanded use of TeamSTEPPS to promote cultural competency of staff
- Improved compliance with other CLAS directives

Future Directions



- *“Cultural Competence is not a panacea that will single handedly improve health outcomes and eliminate disparities, but a necessary set of skills for physicians who wish to deliver high-quality care to all patients. If we accept this premise, we will see cultural competence as a movement that is not marginal but mainstream.”*

J. G. Betancourt, 2004

